PIN29

REDUCTION IN COSTS OVER TWO YEARS WHEN TREATING WITH DARUNAVIR/RITONAVIR COMPARED TO ATAZANAVIR/RITONAVIR IN THE UK

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OBJECTIVES: Darunavir and atazanavir are currently the only protease inhibitors (PIs) recommended by the British HIV Association (BHIVA) treatment guidelines. The Office of AIDS Research Advisory Council (OARAC) reviewed the US HIV guidelines in April 2015 and delisted atazanavir/ritonavir (ATV/r) from the preferred PI options as a result of better tolerability (primarily due to discontinuations caused by adverse events (AEs)) of darunavir/ritonavir (DRV/r) compared to ATV/r based on findings from the ARDENT trial. The objective of this analysis was to quantify the economic impact of treating patients with DRV/r compared to ATV/r for two years in the UK based on drug costs, AEs and discontinuation due to AEs. **METHODS:** A simple Markov model was built in MS Excel with two health states and 6-month cycles (4 cycles in total): on treatment with DRV/r or ATV/r and on subsequent treatment. All patients start on DRV/r or ATV/r and some discontinue and move to a subsequent therapy (weighted average of 3rd agents in treatment experienced patients, £11.10/day at list price). Discontinuation rates from ARDENT were converted to 6-month rates (4.60% for DRV/r and 8.78% for ATV/r) using the method from Miller et al. Patients were assumed to attend 6 further consultant appointments (£325/visit) in the first three months after switching as advised in the BHIVA guidelines for monitoring. AEs from ARDENT were also included. **RESULTS:** Using a list price of £10.57/day for DRV/r and £10.76/day for ATV/r), treatment with DRV/r saved £116 per patient in 6 months, £219 in one year and £393 over two years. Drivers of savings were the cost of consultant appointments and of subsequent treatment. Sensitivity analyses showed how DRV/r was cost saving even when the drug cost of DRV/r and ATV/r was assumed equal. **CONCLUSIONS:** In conclusion DRV/r has proven to be a highly tolerable and cost saving PI.

PIN30

BUDGET IMPACT ANALYSIS AND LONG-TERM DISEASE IMPLICATIONS OF HEPATITIS C TREATMENTS IN SWEDEN

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OBJECTIVES: Treatment of chronic hepatitis C is changing fast given the amount of new drugs coming to the market. Little is known about the budget impact and long term implications of the different treatment options. The objective of this study was to estimate the budget impact of different treatment options on national or regional level and to evaluate the short-term as well as long-term implications of different hepatitis C treatments. **METHODS:** A model flexible for regional and national Swedish cohorts of hepatitis C patients was developed. Cost and effect inputs were taken from published sources and clinical trial data. Using the model, total budget impact as well as cost per cured patient was estimated for different treatments. In addition, long term consequences of different treatments were estimated using a Markov model with transition probabilities from the published model in the field by Lidgren et al.(1) **RESULTS:** Given efficacy rates of over 95%, the new treatments of hepatitis C will cure more patients in Swedish cohorts compared to previous treatments with efficacy rates of around 65%. In the long term, the superior effectiveness of the new treatments would translate into decreases in cases of decompensated cirrhosis, hepatocellular cancer and liver transplants of over 90% among these patients. **CONCLUSIONS:** The new treatments of hepatitis C could improve virologic outcomes among patients. In the long term, cost-savings from reduced burden of disease among these patients are also to be expected. However, in the short term these treatments will require twice the budget size compared to earlier antiviral therapies in this field. (1.) Lidgren M, Hollander A, Weiland O, Jonsson B. Productivity improvements in hepatitis C treatment: impact on efficacy, cost, cost-effectiveness and quality of life. Scand J Gastroenterol. 2007 Jul;42(7):876-77

PIN31

POTENTIAL LONG-TERM COST SAVINGS IN TREATMENT OF NAÏVE HIV-INFECTED PATIENTS WITH RILPIVIRINE/ TENOFOVIR/ EMTRICITABINE (SINGLE TABLET REGIMEN) IN THE RUSSIAN FEDERATION

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OBJECTIVES: To obtain long-term outcomes of using rilpivirine/tenofovir/emtricitabine (single tablet regimen) in treatment of naïve patients with HIV-1 RNA<100 000 copies/ml in the Russian Federation. **METHODS:** Cost analysis was based on the results of modeling the treatment of naïve HIV-infected patients with rilpivirine/tenofovir/emtricitabine (single tablet regimen). Present analysis included assessment of direct (ambulatory treatment and hospitalization) and indirect costs (GDP losses). Cost data was based on median prices for medicines and medical services in National healthcare system in the Russian Federation. **RESULTS:** The use of rilpivirine/tenofovir/emtricitabine (single tablet regimen) in the analyzed population, due to the better adherance and, as a result, better viral suppression, leads to the lower number of new HIV-infected persons. Therefore in life-time perspective the potential total costs savings for the whole population can be up to 8% (€ 1 116 010 172) and 6% (€ 841 581 441) compared to efavirenz + tenofovir/ emtricitabin (multi-pill regimen) and lopinavir + tenofovir/ emtricitabin (multi-pill regimen), respectively. **CONCLUSIONS:** Obtained results showed that better adherence on the treatment scheme rilpivirine/tenofovir/emtricitabine (single tablet regimen) among naïve patients with HIV-1 RNA<100 000 copies/ml can lead to potential significant long-term cost savings.

PIN32

COMPARISON OF DIRECT HOSPITALIZATION COSTS AND LENGTH OF STAY IN CARBAPENEM RESISTANT VERSUS CARBAPENEM SENSITIVE KLEBSIELLA PNEUMONIAE INFECTIONS IN A TERTIARY CARE HOSPITAL

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OBJECTIVES: To find out the average direct hospitalization cost and length of hospital stay for patients infected with Carbapenem-resistant Klebsiella pneumonia (CRKp) and compare it with that of patients infected with Carbapenem-sensitive Klebsiella pneumonia (CSKp). **METHODS:** A cross sectional study was carried out from January-December 2014 and the data for hospitalization cost was collected for the patients with CRKp and CSKp infections from the medicine ICU for 72 patients admitted to the hospital. The data was analyzed for the site of infection, length of stay and average direct hospitalization cost which was then compared between the two groups. **RESULTS:** During the study period, 101 patients were diagnosed with Klebsiella pneumoniae infection. 61.79% of the infections were respiratory, 24.52% urinary tract- related, 13.2% systemic and 0.47% skin and soft tissue-related. The mean age of the study population was 51.7 ± 15.7 years. The median length of stay for CRKp was 12 (11; 23) days as compared to 8 (5.2; 13.2) days in CSKp patients . The median direct hospitalization cost was calculated to be INR 43,274 (24,898; 16,0315) in case of CRKp versus INR 23,452 (12,489; 47,349) in CSKp patients. **CONCLUSIONS:** We observed that the average cost of overall therapy and the average no. of hospitalization days was higher in CRKp group compared to CSKp group. Antibiotic resistance is a growing phenomenon and the resistance to Carbapenems can lead to increased burden of morbidity and treatment cost for patients.

PIN33

DIRECT COSTS AND LENGTH OF STAY IN PATIENTS WITH METHICILLIN RESISTANT VERSUS METHICILLIN SENSITIVE STAPHYLOCOCCUS AUREUS INFECTION IN A TERTIARY CARE HOSPITAL IN INDIA

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OBJECTIVES: Antibiotic resistance is known to be associated with increased burden of morbidity, mortality and treatment costs all over the world. Methicillin resistant Staphylococcus aureus is one of the most important gram positive bacteria which causes serious community acquired as well as hospital acquired infections. The objective of this study is to compare the direct costs and length of stay in MRSA versus MSSA infections among in-patients of the hospital. **METHODS:** A cross sectional study was carried out from Jan-Dec 2013 and the hospitalization cost was collected for the patients with MRSA and MSSA infections from the medicine ICU and the microbiology department for 63 patients. The data was analyzed for the type of infection and the average hospitalization cost. The median hospitalization cost was calculated for both the group of patients. **RESULTS:** Out of the 63 patients observed, 44 (69.84%) patients were infected with MRSA and 19 (30.15%) were infected with MSSA. The median length of stay was 10 days in MRSA group as compared to 7.5 days in MSSA group. The median hospitalization cost for MRSA infection was INR 16,383 and for MSSA it was INR 11,481. **CONCLUSIONS:** Methicillin resistance in Staphylococcus aureus is associated with increased length of stay and hospitalization costs. Increased length of stay leads to further increase in the treatment costs and morbidity of the patients as it may lead to nosocomial infections.

PIN34

PHARMACOECONOMIC ANALYSIS OF THE USE OF VORICONAZOLE, POSACONAZOLE AND MICAFUNGIN IN THE PRIMARY PROPHYLAXIS OF INVASIVE FUNGAL INFECTIONS IN RECIPIENTS OF ALLOGENEIC HEMATOPOIETIC STEM CELL TRANSPLANTS IN SPAIN

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OBJECTIVES: To compare the cost of the primary prophylaxis of invasive fungal infections (IFI) with voriconazole, posaconazole, and micafungin in patients undergoing allogeneic hematopoietic stem cell transplantation (HSCT) in hospitals of the National Health System (NHS) in Spain. **METHODS:** A cost analysis was made for 100 days and 180 days of prophylaxis and a decision tree model was developed. The efficacy rate of IFI prophylaxis, mortality rate from all causes in patients with/without IFI and survival rate with liposomal amphotericin B treatment of prophylaxis failures were obtained from randomized trials and a mixed treatment comparisons meta-analysis. The model simulation was interrupted with IFI treatment (prophylaxis failures). The costs of medication and its intravenous administration in the hospital (in the case of micafungin) were considered. **RESULTS:** In the non-modeled analysis, the savings per patient of prophylaxis with voriconazole ranged from €1,709 to €9,655 compared with posaconazole oral solution, from €1,811 to €9,767 compared with posaconazole gastro-resistant tablets and from €3,376 to €7,713 compared with micafungin. In the modeled analysis, the mean cost per patient of the prophylaxis and treatment of IFIs was € 6,987 to € 7,619 with voriconazole, € 7,749 with posaconazole, and € 22,424 with micafungin. Therefore, the savings per patient of prophylaxis with voriconazole was € 130 to € 3,664 and € 11,132 to € 30,374 compared with posaconazole and micafungin, respectively. The result remained stable after modification of the number of days of antifungal prophylaxis and the cost of antifungal treatment of failures. **CONCLUSIONS:** According to the model, antifungal prophylaxis with voriconazole in recipients of hematopoietic progenitor transplants, compared with posaconazole or micafungin, may represent savings for NHS hospitals in Spain.

PIN35

DIRECT MEDICAL COST ASSOCIATED WITH THE DIAGNOSIS AND TREATMENT OF PATIENTS WITH CHRONIC HEPATITIS-B IN THREE LARGE METROPOLITAN CITIES IN INDIA – A PILOT STUDY

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